CONFORMANCE TEST REPORT
FOR
EN 301489-1/-6

Report No.: 60.860.8.048.02E

Client:	SunCorp Communications Limited
Product:	DECT Phone
Model:	DECT20-B94-RF19 (FP)
Manufacturer/supplier:	Shenzhen Guo Wei Electronics Co., Ltd.

Date test item received:	2008/04/07
Date test campaign completed:	2008/04/14
Date of issue:	2008/04/15
Test results:	**COMPLIED**

Total number of pages of this test report: 40 pages

Approved by

Jeff Pong
Deputy Telecom Manager

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1 TEST REPORT CERTIFICATION

Client	: SunCorp Communications Limited	
Address	: Room 1907-08, 19/F, Harcourt House, 39 Gloucester Road, Wanchai, Hong Kong	
Manufacturer	: Shenzhen Guo Wei Electronics Co., Ltd.	
EUT	: DECT Phone	
Model No.	: DECT20-B94-RF19 (FP)	
Test Specifications	: Emissions EN 55022:2006(Class B) EN 61000-3-2:2006 EN 61000-3-3:1995/A2:2005	Immunity EN 61000-4-2:1995/A2:2001 EN61000-4-3:2006 EN 61000-4-4:2004 EN 61000-4-5:2006 EN 61000-4-6:1996/A1:2001 EN 61000-4-11:2004
Regulations Applied	: EN 301489-1:V1.6.1 EN 301489-6:V1.2.1 EN 61000-3-2:2006 EN 61000-3-3: 1995/A2:2005	

Test Location: T01

The testing described in this report has been carried out to the best of our knowledge and ability, and our responsibility is limited to the exercise of reasonable care. This certification is not intended to believe the sellers from their legal and/or contractual obligations.

2 GENERAL INFORMATIONS

2.1 Description of EUT:

The Test Candidate is a fixed part with integrated antennas of a cordless telephone system for 3.1 kHz voice-communications on DECT Feature phone-standard. For the integrated antennas a diversity-switch is included to the equipment. This fixed part (FP) is used in combination with a portable part (PP) for connections to the analogue public switched telephone network.

2.2 Related Informations of EUT:

Power Supply : 230Vac, 50Hz

Cables dedicated for EUT:

Power Line : ■ Nonshielded □ Shielded □ None , length: 1.8 m

Control Line : □ Nonshielded □ Shielded ■ None , length: _____ m

TEL. Line : ■ Nonshielded □ Shielded □ None , length: 1.5 m

* For more detailed features, please refer to *User's Manual*.

2.3 Modification Record:

No modifications were required. (That mean the EUT has complied with the requirement as tested.)

3 SUMMARY OF TEST RESULTS

3.1 Emissions:

3.1.1 Conducted Emissions

■-PASS

Peak EMI value to the limit: -15.3 dB at 7.505 MHz

3.1.2 Radiated Emissions

■-PASS

Peak EMI value to the limit: -7.7 dB at 96.843 MHz

3.1.3 Harmonics Current Emissions

■-PASS

The harmonics current values were under the limits of the class A equipment of the EN 61000-3-2.

3.1.4 Voltage Fluctuations and Flicker

■-PASS

The voltage fluctuations and flicker values were under the limits of the EN 61000-3-3 requirements.

3.2 Immunity:

3.2.1 Immunity Criteria:

The results of all of the immunity tests performed on the EUT were evaluated according to the following criteria, and according to the manufacturer's specifications for the EUT:

Performance criterion for Continuous Phenomena applied to DECT Phone Transceivers (CT):

The BER of the signal as measured shall not exceed 1×10^{-3} during the test sequence. Additionally for equipment containing analogue speech circuits the speech output signal level shall be at least 35dB less than the previously recorded reference level. At the conclusion of the test, the EUT shall operate as intended with no loss of user control functions or stored data and the communications link shall have been maintained during and after tests. Where the EUT is capable of transmission, tests shall be performed to ensure that unintentional transmission does not occur.

Performance criterion for Transient phenomena applied to DECT Phone Transceivers (TT):

At the conclusion of each exposure the EUT shall operate with no user noticeable loss of the communications link. At the conclusion of the total test comprising the series of individual exposures the EU shall operate as intended with no loss of user control functions or stored data, as declared by the manufacturer, and the communications link shall have been maintained. Where the EUT is capable of transmission, tests shall be performed to ensure that unintentional transmission does not occur.

Performance criterion for Continuous phenomena applied to DECT Phone Receive-only equipment (CR):

The primary functions shall be verified during each individual exposure in the test sequence. Additionally for equipment containing analogue speech circuits the speech output signal level shall be at least 35 dB less than the previously recorded reference level. At the conclusion of the test, the EU shall operate as intended with no loss of user control functions or stored data, as declared by the manufacturer, and the communications link shall have been maintained. This shall be verified by checking the primary functions.

Performance criterion for Transient phenomena applied to DECT Phone Receive-only equipment (TR):

At the conclusion of each exposure the EUT shall operate with no user noticeable loss of the communications link. At the conclusion of the total test comprising the series of individual exposures the EUT shall operate as intended with no loss of user control functions or stored data, as declared by the manufacturer, and the communications link shall have been maintained. This shall be verified by checking the primary functions.

3.2.2 Electrostatic Discharge:

■-PASS

For transceivers the general performance criteria TT shall apply. For stand alone receivers the general performance criteria TR shall apply. For ancillary equipment the pass/fail criteria supplied by the manufacturer shall apply, unless the ancillary equipment is tested in connection with receivers or transceivers in which case the corresponding performance criteria above shall apply.

3.2.3 Radio Frequency Electromagnetic Field (80~1000MHz and 1400~2000MHz):

■-PASS

For transceivers the general performance criteria CT shall apply. For stand alone receivers the general performance criteria CR shall apply. For ancillary equipment the pass/fail criteria supplied by the manufacturer shall apply, unless the ancillary equipment is tested in connection with receivers or transceivers in which case the corresponding performance criteria above shall apply.

3.2.4 Fast Transients Common Mode:

■-PASS

For transceivers the general performance criteria TT shall apply. For stand alone receivers the general performance criteria TR shall apply. For ancillary equipment the pass/fail criteria supplied by the manufacturer shall apply, unless the ancillary equipment is tested in connection with receivers or transceivers in which case the corresponding performance criteria above shall apply.

3.2.5 Surges, Common and Differential Mode:

■-PASS

For transceivers the general performance criteria TT shall apply. For receivers the general performance criteria TR shall apply. For ancillary equipment the pass/fail criteria supplied by the manufacturer shall apply, unless the ancillary equipment is tested in connection with receivers or transceivers in which case the corresponding performance criteria above shall apply.

3.2.6 RF Common Mode, 0.15~80MHz:

■-PASS

For transceivers the general performance criteria CT shall apply. For stand alone receivers the general performance criteria CR shall apply. For ancillary equipment the pass/fail criteria supplied by the manufacturer shall apply, unless the ancillary equipment is tested in connection with receivers or transceivers in which case the corresponding performance criteria above shall apply.

3.2.7 Voltage Dips and Interruptions:

■-PASS

For transceivers the general performance criteria CT shall apply. For stand alone receivers the general performance criteria CR shall apply. For ancillary equipment the pass/fail criteria supplied by the manufacturer shall apply, unless the ancillary equipment is tested in connection with receivers or transceivers in which case the corresponding performance criteria above shall apply.

4 TEST DATA & RELATED INFORMATIONS

4.1 Emissions:

4.1.1 Conducted Emissions Test:

4.1.1.1 Conducted Emissions Test Data:

A. Operating Conditions of the EUT: Talking Mode

Test Date: Apr. 14, 2008

Test Specification	EN 55022:2006 (Class B)	
Test Equipment	Calibration Date	Recommended Recal. Date
EMI Test Receiver\R&S\ESCS30 LISN\Telemeter\NNB-2/16Z LISN\EMCO\37100/2M	Jul. 17, 2007 Mar. 30, 2008 Feb. 12, 2008	Jul. 16, 2008 Mar. 29, 2009 Feb. 11, 2009
Climatic Condition	Ambient Temperature: 22◦ C	Relative Humidity: 65 % RH
Power Supply System	AC Power: 230 Vac 50 Hz	
Test Set-up	Table-top Equipment	

Freq. (MHz)	**Meter Reading** (dBuV)				**Factor** (dB)	**Result** (dBuV)				**Limit** (dBuV)		**Margins** (dB)
	Q.P. Value		AVG. Value			Q.P. Value		AVG. Value		Q.P. Value	AVG. Value	Q.P. or AVG.
	L1	L2	L1	L2		L1	L2	L1	L2			
0.166	***	41.0	----	33.0	0.2	***	41.2	----	33.2	65.2	55.2	-24.0
0.209	38.1	***	33.2	----	0.2	38.3	***	33.4	----	63.2	53.2	-24.9
0.283	33.6	***	26.8	----	0.2	33.8	***	27.0	----	60.7	50.7	-26.9
0.330	***	27.7	----	22.0	0.2	***	27.9	----	22.2	59.5	49.5	-31.6
0.502	27.7	***	23.6	----	0.2	27.9	***	23.8	----	56.0	46.0	-28.1
0.541	***	28.0	----	23.4	0.2	***	28.2	----	23.6	56.0	46.0	-27.8
0.748	***	35.0	----	27.6	0.2	***	35.2	----	27.8	56.0	46.0	-20.8
0.795	34.1	***	27.3	----	0.2	34.3	***	27.5	----	56.0	46.0	-21.7
1.123	***	36.1	----	28.1	0.2	***	36.3	----	28.3	56.0	46.0	-19.7
2.005	***	34.0	----	27.6	0.2	***	34.2	----	27.8	56.0	46.0	-21.8
2.080	34.6	***	26.4	----	0.2	34.8	***	26.6	----	56.0	46.0	-21.2
5.002	***	26.5	----	16.7	0.3	***	26.8	----	17.0	60.0	50.0	-33.2
7.505	***	44.3	----	26.0	0.4	***	44.7	----	26.4	60.0	50.0	-15.3
8.263	33.9	***	9.7	----	0.4	34.3	***	10.1	----	60.0	50.0	-25.7

Notes: 1) Place of measurement: EMC LAB. of the ETC (1F)

2) The EUT was placed 0.8m above reference ground plane.

3) Example calculation: result for 0.166 MHz: 41.0+ 0.2= 41.2 dB μ V

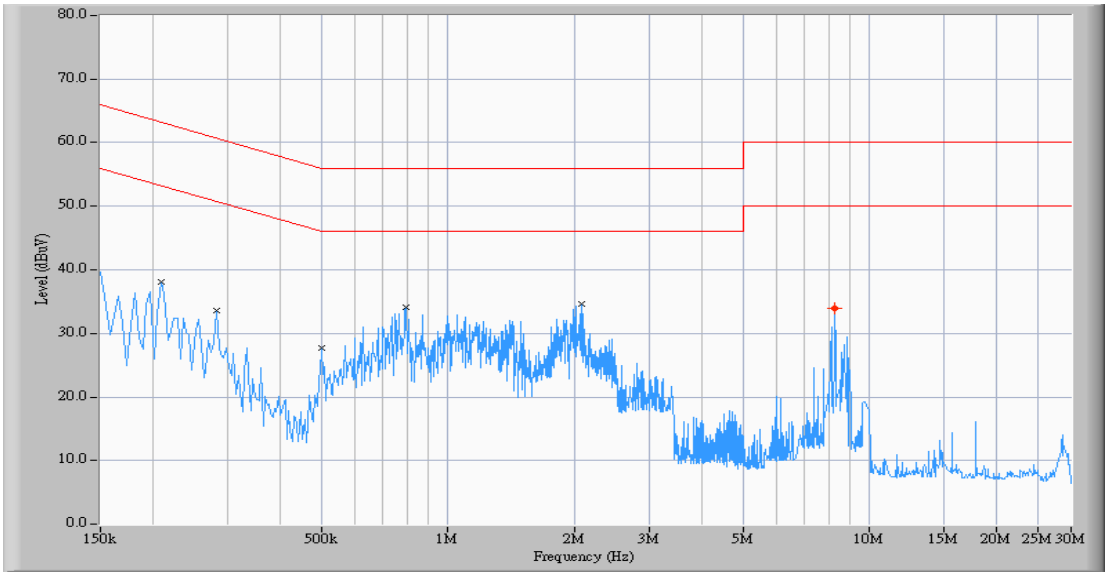
4) ① If the data table appeared symbol of "***" means the value was too low to be measured.

② If the data table appeared symbol of "----" means the Q.P. value is under the limit for AVG. so, the AVG. value doesn't need to be measured.

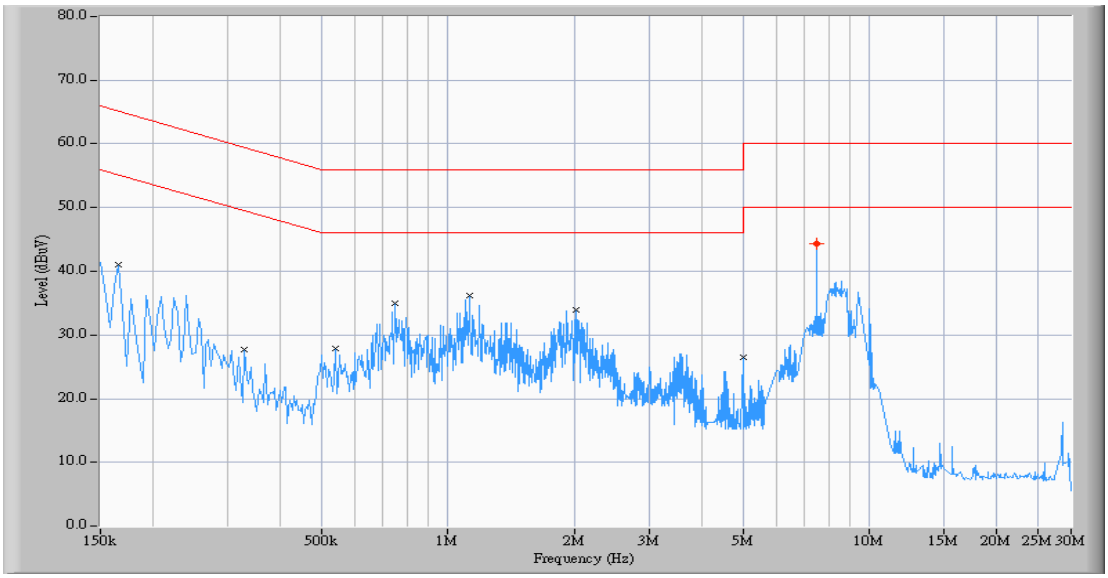
③ If the data table appeared symbol of “#“ means the noise was low, so record the peak value.

5) The estimated measurement uncertainty of the result measurement is ±2.5dB.

Power Line-L1



Power Line-L2



B. Operating Conditions of the EUT: Talking Mode

Test Date: Apr. 14, 2008

Test Specification	EN 55022: 2006 (Class B)	
Test Equipment	Calibration Date	Recommended Recal. Date
EMI Test Receiver\R&S\ESCS30 Current probe\Schaffner\SMZ11	Jul. 17, 2007 Apr. 01, 2008	Jul. 16, 2008 Mar. 31, 2009
Climatic Condition	Ambient Temperature: 22◦ C	Relative Humidity: 65 % RH
Power Supply System	AC Power: 230 Vac 50 Hz	
Test Set-up	Table-top Equipment	

Freq. (MHz)	**Meter Reading** (dBuA)		**Factor** (dB)	**Result** (dBuA)		**Limit** (dBuA)		**Margins** (dB)
	Q.P. Value	AVG. Value		Q.P. Value	AVG. Value	Q.P. Value	AVG. Value	Q.P. or AVG.
	ISN	ISN		ISN	ISN			
0.212	13.6	----	0.2	13.8	----	37.1	27.1	-23.3
0.240	14.9	----	0.2	15.1	----	36.1	26.1	-21.0
0.673	9.8	----	0.2	10.0	----	30.0	20.0	-20.0
0.810	11.9	----	0.2	12.1	----	30.0	20.0	-17.9
0.990	11.1	----	0.2	11.3	----	30.0	20.0	-18.7
1.099	12.0	----	0.2	12.2	----	30.0	20.0	-17.8
1.400	10.7	----	0.2	10.9	----	30.0	20.0	-19.1
1.998	11.7	----	0.2	11.9	----	30.0	20.0	-18.1

Notes: 1) Place of measurement: EMC LAB. of the ETC (1F)

2) The EUT was placed 0.4m above reference ground plane.

3) Example calculation: result for 0.212 MHz: 13.6 + (0.2) = 13.8 dB μ A

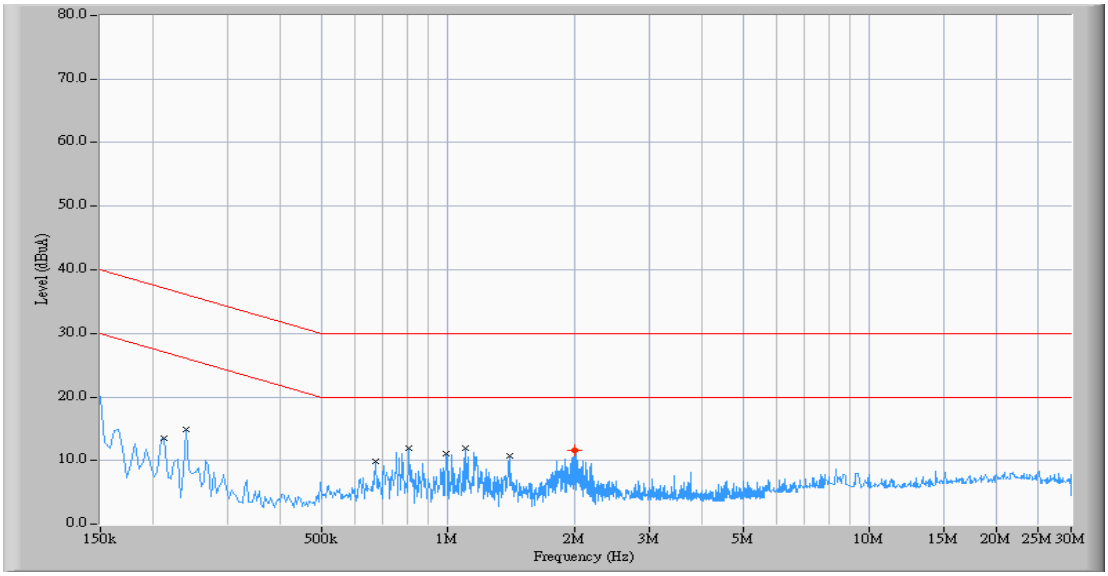
4) ① If the data table appeared symbol of "***" means the value was too low to be measured.

② If the data table appeared symbol of "----" means the Q.P. value is under the limit for AVG. so, the AVG. value doesn't need to be measured.

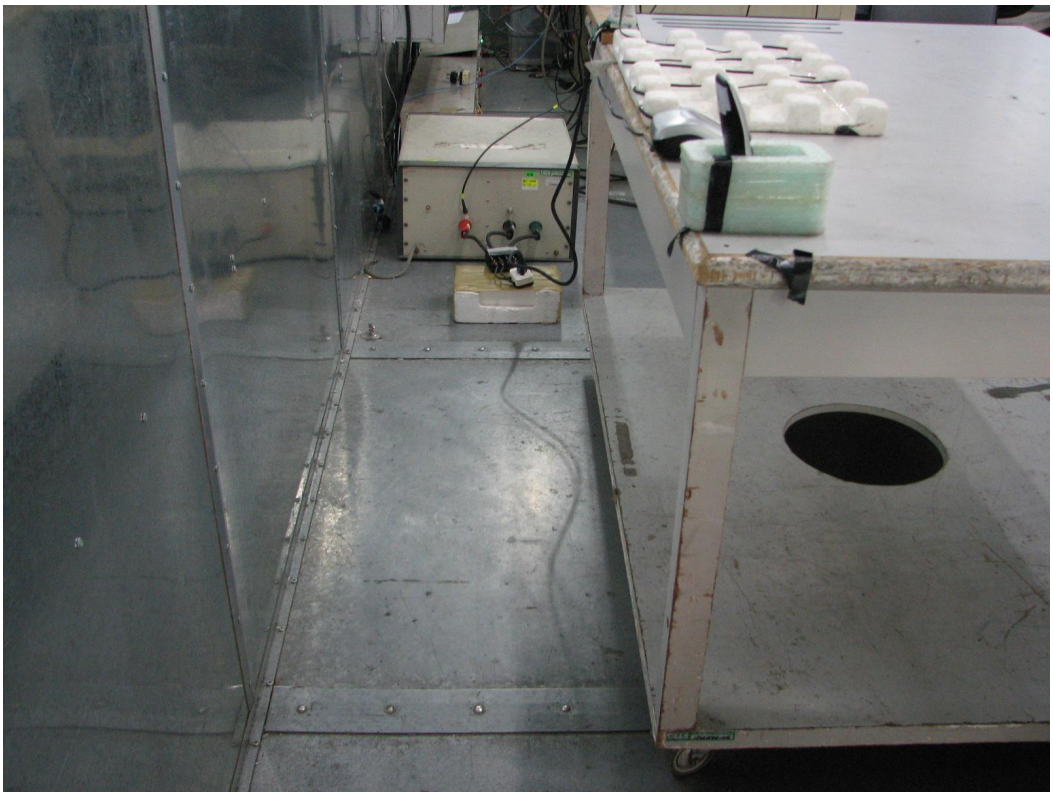
③ If the data table appeared symbol of "#" means the noise was low, so record the peak value.

5) The estimated measurement uncertainty of the result measurement is ±2.5dB.

TEL Line-ISN


80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
Level (dBuA)
150k
500k
1M
2M
3M
5M
10M
15M
20M
25M
30M
Frequency (Hz)

4.1.1.2 Conducted Emissions Test Setup Photos:



4.1.2 Radiated Emissions Test:

4.1.2.1 Radiated Emissions Test Data:

A. Operating Conditions of the EUT: Talking Mode

Test Date: Apr. 14, 2008

Test Specification	EN 55022:2006 (Class B)	
Test Equipment	Calibration Date	Recommended Recal. Date
EMI Test Receiver\R&S\ESCS30 Ant.- LogBiconi\EMCO\3142	Oct. 23, 2007 Mar. 29, 2008	Oct. 22, 2008 Mar. 28, 2009
Climatic Condition	Ambient Temperature: 20° C	Relative Humidity: 60 % RH
Power Supply System	AC Power: 230 Vac 50 Hz	
Test Set-up	Table-top Equipment	

Emission **Frequency** (MHz)	**Meter Reading** (dBuV)		CORR'd **Factor** (dB/m)	**Results** (dBuV/m)		**Limit** (dBuV/m)	**Margins** (dB)
	HOR.	**VERT.**		**HOR.**	**VERT.**		
53.317	***	8.5	9.4	***	17.9	30	-12.1
89.071	5.4	***	9.5	14.9	***	30	-15.1
96.843	8.4	12.7	9.6	18.0	22.3	30	-7.7
106.170	4.7	***	10.1	14.8	***	30	-15.2
109.279	***	6.1	10.1	***	16.2	30	-13.8
117.051	2.9	3.8	9.4	12.3	13.2	30	-16.8
182.340	***	2.4	13.6	***	16.0	30	-14.0
193.221	1.2	***	13.8	15.0	***	30	-15.0
238.301	3.7	***	16.4	20.1	***	37	-16.9
239.856	***	5.0	14.9	***	19.9	37	-17.1
264.728	2.3	***	17.0	19.3	***	37	-17.7

Notes: 1) Place of Measurement: Measuring site of the ETC (3F)

2) Measurement Distance: 10 m

3) Height of table on which the EUT was placed: 0.8 m

4) Height of Receiving Antenna: 1 - 4 m

5) Example Calculation: result for 53.317 MHz 8.5+ (9.4) = 17.9 dB μ V/m

6) ① If the data table appeared symbol of "***" means the value was too low to be measured.

② If the data table appeared symbol of "----" means the Q.P. value is under the limit for AVG. so, the AVG. value doesn't need to be measured.

③ If the data table appeared symbol of "#" means the noise was low, so record the peak

7) The estimated measurement uncertainty of the result measurement is

+ 4.5dB / - 4.6dB (30MHz $\leqq f \leqq$ 300MHz)

+ 4.3dB / - 4.3dB (300MHz $\leqq f \leqq$ 1GHz)

4.1.2.2 Radiated Emissions Test Setup Photos:

4.1.3 Harmonics Current Emissions Test:

4.1.3.1 Harmonics Current Emissions Test Data:

A. Operating Conditions of the EUT: Talking Mode

Test Date: Apr. 14, 2008

Test Specification	EN 61000-3-2: 2006		
Test Equipment		Calibration Date	Recommended Recal. Date
Power Analysis System\California Instruments\ MX45-3PI-413 (PACS-3)		Sep. 29, 2007	Sep. 28, 2008
Climatic Condition	Ambient Temperature: 21◦ C		Relative Humidity: 54 % RH
Power Supply System	AC Power: 230 Vac 50 Hz		
Test Set-up	Table-top Equipment		

Test data see the next page.

Current Test Result Summary (Run time)

EUT: DECT20-B94-RF19 Tested by:
Test category: Class-A per Ed. 2.2 (European limits) Test Margin: 100
Test date: 4/14/2008 Start time: 10:02:00 AM End time: 10:05:10 AM
Test duration (min): 3 Data file name: CTSMXL_H-000079.cts_data
Comment:
Customer:

Test Result: Pass Source qualification: Normal
THC(A): 0.010 I-THD(pk%): 83.053 POHC(A): 0.003 POHC Limit(A): 0.251
Highest parameter values during test:

V_RMS (Volts):	229.85	Frequency(Hz):	50.00
I_Peak (Amps):	0.169	I_RMS (Amps):	0.093
I_Fund (Amps):	0.017	Crest Factor:	6.095
Power (Watts):	2.3	Power Factor:	0.458

Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0.002	1.080	0.2	0.003	1.620	0.19	Pass
3	0.006	2.300	0.3	0.007	3.450	0.19	Pass
4	0.001	0.430	0.2	0.001	0.645	0.20	Pass
5	0.004	1.140	0.3	0.004	1.710	0.24	Pass
6	0.001	0.300	0.3	0.001	0.450	0.24	Pass
7	0.001	0.770	0.1	0.001	1.155	0.09	Pass
8	0.000	0.230	0.2	0.001	0.345	0.21	Pass
9	0.001	0.400	0.1	0.001	0.600	0.14	Pass
10	0.001	0.184	0.3	0.001	0.276	0.24	Pass
11	0.001	0.330	0.2	0.001	0.495	0.15	Pass
12	0.001	0.153	0.5	0.001	0.230	0.38	Pass
13	0.000	0.210	0.2	0.001	0.315	0.20	Pass
14	0.000	0.131	0.3	0.001	0.197	0.26	Pass
15	0.000	0.150	0.3	0.001	0.225	0.22	Pass
16	0.000	0.115	0.4	0.001	0.173	0.31	Pass
17	0.000	0.132	0.3	0.001	0.199	0.28	Pass
18	0.001	0.102	0.5	0.001	0.153	0.41	Pass
19	0.000	0.118	0.4	0.001	0.178	0.31	Pass
20	0.000	0.092	0.4	0.000	0.138	0.35	Pass
21	0.000	0.107	0.4	0.001	0.161	0.34	Pass
22	0.000	0.084	0.5	0.001	0.125	0.41	Pass
23	0.000	0.098	0.4	0.000	0.147	0.34	Pass
24	0.001	0.077	0.9	0.001	0.115	0.68	Pass
25	0.000	0.090	0.5	0.001	0.135	0.45	Pass
26	0.000	0.071	0.6	0.001	0.106	0.48	Pass
27	0.001	0.083	0.7	0.001	0.125	0.55	Pass
28	0.000	0.066	0.7	0.001	0.099	0.58	Pass
29	0.000	0.078	0.5	0.000	0.116	0.41	Pass
30	0.001	0.061	1.3	0.001	0.092	0.96	Pass
31	0.001	0.073	0.8	0.001	0.109	0.60	Pass
32	0.001	0.058	1.6	0.001	0.086	1.19	Pass
33	0.001	0.068	1.7	0.001	0.102	1.30	Pass
34	0.001	0.054	1.1	0.001	0.081	0.91	Pass
35	0.002	0.064	2.5	0.002	0.096	1.78	Pass
36	0.000	0.051	1.0	0.001	0.077	0.97	Pass
37	0.002	0.061	2.6	0.002	0.091	1.86	Pass
38	0.001	0.048	1.3	0.001	0.073	1.03	Pass
39	0.001	0.058	2.2	0.001	0.087	1.60	Pass
40	0.000	0.046	0.8	0.001	0.069	0.81	Pass

4.1.3.2 Harmonics Current Emissions Test Setup Photos:

4.1.4 Voltage Fluctuations and Flicker Test:

4.1.4.1 Voltage Fluctuations and Flicker Test Data:

A. Operating Conditions of the EUT: Talking Mode

Test Date: Apr. 14, 2008

Test Specification	EN 61000-3-3:1995/A2:2005		
Test Equipment		Calibration Date	Recommended Recal. Date
Power Analysis System\California Instruments\ MX45-3PI-413 (PACS-3)		Sep. 29, 2007	Sep. 28, 2008
Climatic Condition	Ambient Temperature: 21◦ C	Relative Humidity: 54 % RH	
Power Supply System	AC Power: 230 Vac 50 Hz		
Test Set-up	Table-top Equipment		

	Test Data	Limit	Pass or Fail
Plt	0.127	0.65	Pass
Pst	0.160	1.00	Pass
dt	0.00%	3.3 %	Pass
dmax	0.00%	4.0%	Pass
dc	0.00%	3.3%	Pass

4.1.4.2 Voltage Fluctuations and Flicker Test Setup Photos:

4.2 Immunity:

4.2.1 Electrostatic Discharge:

4.2.1.1 Electrostatic Discharge Test Data:

A. Operating Conditions of the EUT: Talking Mode

Test Date: Apr. 14, 2008

Test Specification	EN 61000-4-2: 1995/A2:2001		
Test Equipment		Calibration Date	Recommended Recal. Date
ESD Simulator\Noiseken\ESS-2000-G365		Nov. 28, 2007	Nov. 27, 2008
Climatic Condition	Ambient Temperature: 23 ◦C Atmospheric Pressure: 983 mbar	Relative Humidity: 41 % RH	
Power Supply System	AC Power: 230 Vac 50 Hz		
Test Set-up	Table-top Equipment		

Test Points	Contact Discharge (kV): Criterion					Air Discharge (kV): Criterion					Test times and voltage at each condition	
1.EUT-VCP	■2: A	■4: A	□ 6: _	□ 8: _	□ _: _	□ 2: _	□ 4: _	□ 8: _	□ 15: _	□ _: _	■10..neg	■10..pos
2.EUT-HCP	■2: A	■4: A	□ 6: _	□ 8: _	□ _: _	□ 2: _	□ 4: _	□ 8: _	□ 15: _	□ _: _	■10..neg	■10..pos
3.EUT-charge point	■2: A	■4: A	□ 6: _	□ 8: _	□ _: _	□ 2: _	□ 4: _	□ 8: _	□ 15: _	□ _: _	■10..neg	■10..pos
4.EUT-Top Side	□ 2: _	□ 4: _	□ 6 : _	□ 8: _	□ _: _	■2: A	■4: A	■8: A	□ 15: _	□ _: _	■10..neg	■10..pos
5.EUT-Front Side	□ 2: _	□ 4: _	□ 6: _	□ 8: _	□ _: _	■2: A	■4: A	■8: A	□ 15: _	□ _: _	■10..neg	■10..pos
6.EUT-Rear Side	□ 2: _	□ 4: _	□ 6: _	□ 8: _	□ _: _	■2: A	■4: A	■8: A	□ 15: _	□ _: _	■10..neg	■10..pos
7.EUT-Right Side	□ 2: _	□ 4: _	□ 6: _	□ 8: _	□ _: _	■2: A	■4: A	■8: A	□ 15: _	□ _: _	■10..neg	■10..pos
8.EUT-Left Side	□ 2: _	□ 4: _	□ 6: _	□ 8: _	□ _: _	■2: A	■4: A	■8: A	□ 15: _	□ _: _	■10..neg	■10..pos

Result:	■ Complied	□ Does not comply	
Criterion Required:	B	Criterion Met:	A

Note: " A " means the EUT operates with ■ no loss of functions.

■ no unintentional responses during and after test.

" -- " means the test is not applicable.

4.2.1.2 Electrostatic Discharge Test Setup Photos:

4.2.2 Radio Frequency Electromagnetic Field (80~1000MHz and 1400~2000MHz):

4.2.2.1 Radio Frequency Electromagnetic Field Test Data:

A. Operating Conditions of the EUT: Talking Mode

Test Date: Apr. 14, 2008

Test Specification	EN 61000-4-3:2006	
Test Equipment	Calibration Date	Recommended Recal. Date
Microphone\B&K\4134	Nov. 28, 2007	Nov. 27, 2008
Conditioning Amplifier\B&K\type 2690	Nov. 22, 2007	Nov. 21, 2008
Audio Analyzer\R&S\UPA	May 29, 2007	May 28, 2008
Signal Generator\Agilent\8648D	May 29, 2007	May 28, 2008
RF Power Amplifier\AR\50S1G4AM1	May 29, 2007	May 28, 2008
Wide Band RF Amplifier\KALMUS\7100LC	Nov. 28, 2007	Nov. 27, 2008
Agilent E4419B EPM series Power Meter	Nov. 23, 2007	Nov. 22, 2008
Digital Radio Tester\R&S\CTS60	Mar. 14, 2008	Mar. 13, 2009
Climatic Condition	Ambient Temperature: 20 ◦C	Relative Humidity: 53 % RH
Power Supply System	AC Power: 230 Vac 50 Hz	
Test Set-up	Table-top Equipment	

Frequency Range : 80 MHz ~ 1000 MHz 1400 MHz ~ 2000 MHz	Field Strength: 3 V/m	Modulation (AM 1kHz 80%)
Sweep Rate: ≤ 1.5×10^{-3} decades/s	Step Size: ≤ 1 % of preceding frequency value	Dwell Time: 2.9 s

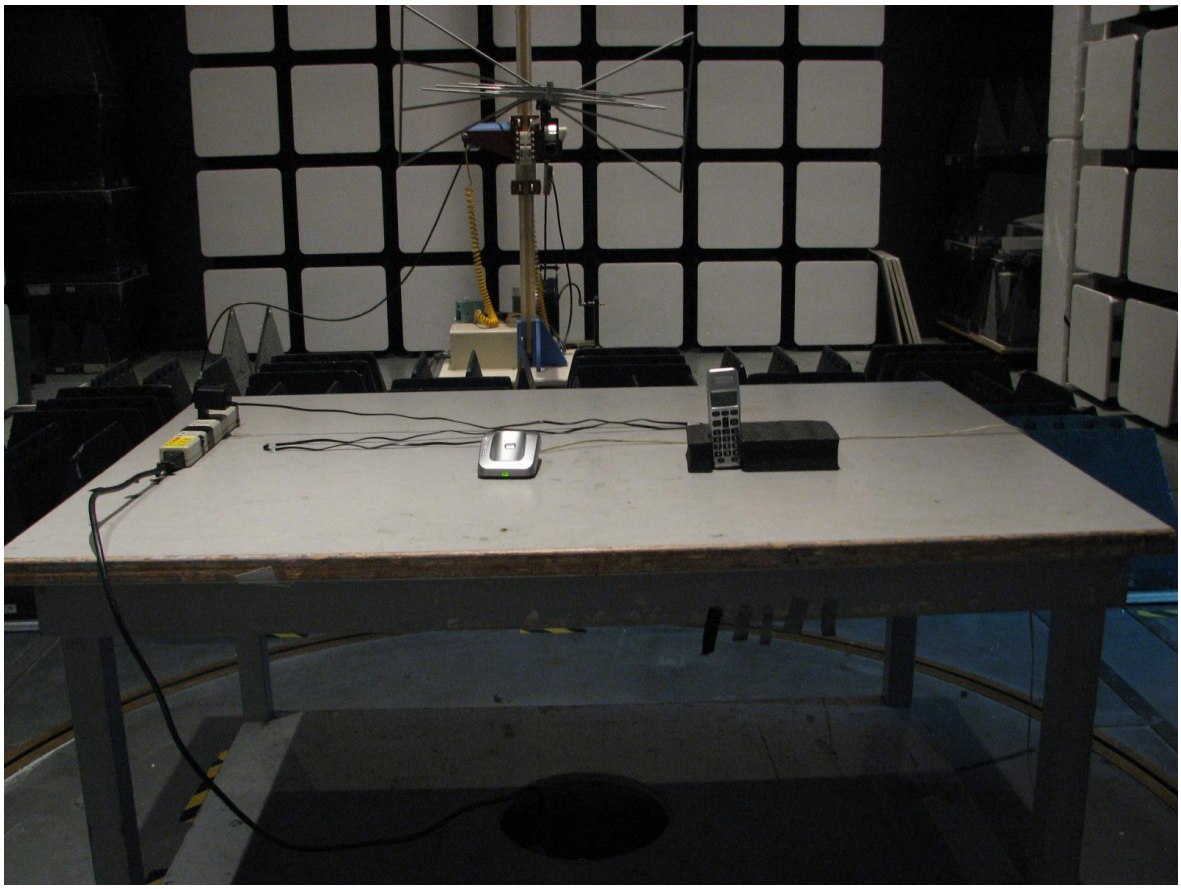
Frequency Range (MHz)	Polarization of Device	Test Result
80~1000	Vertical	A
80~1000	Horizontal	A
1400~2000	Vertical	A
1400~2000	Horizontal	A

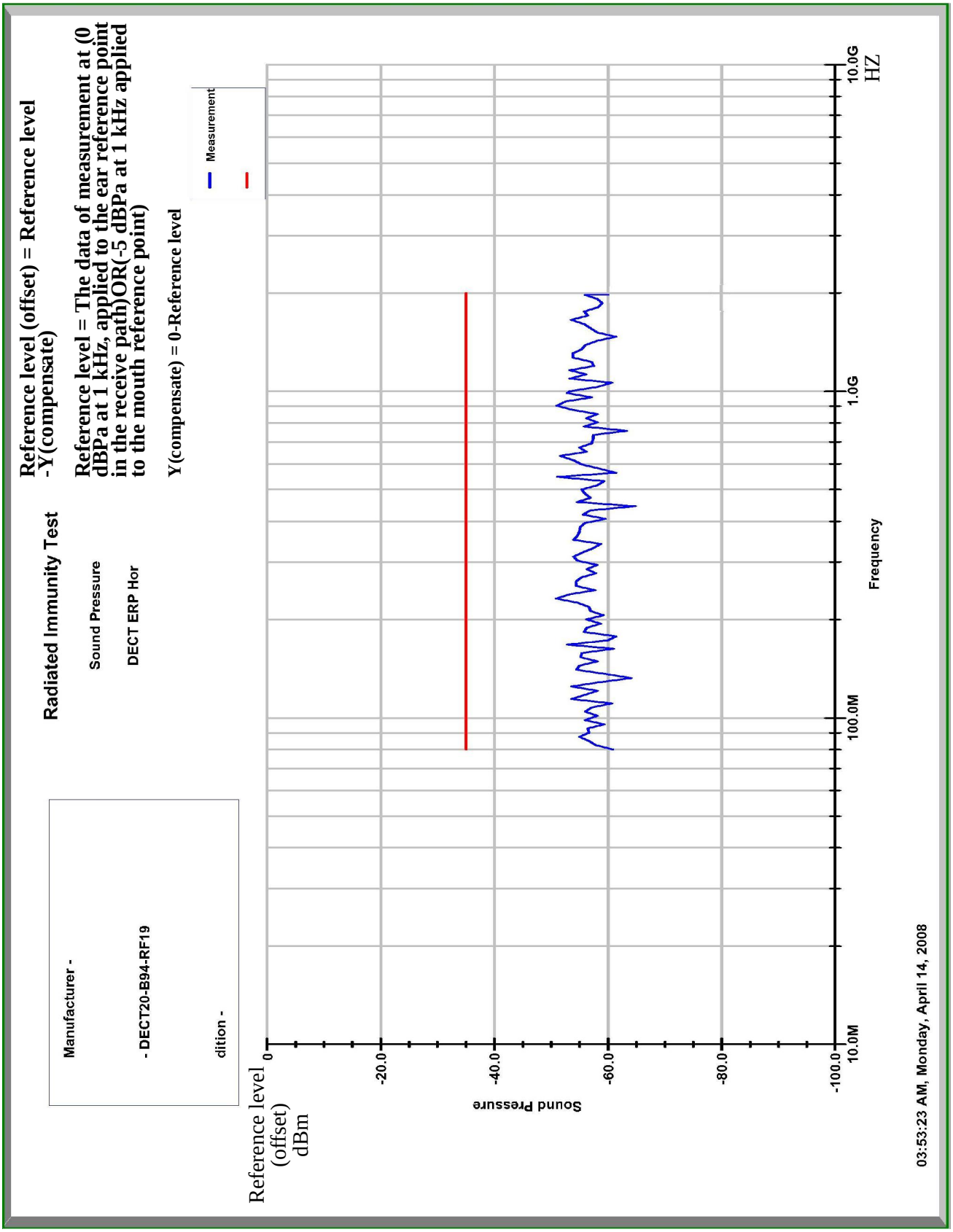
Note: " A " means the EUT operates with ■ BER less or equal than 1×10^{-3} during the test sequence.
■ the speech output signal level at least 35dB less than the previously recorded reference level.
■ no loss of user control functions or stored data and maintained communication link during and after the tests.
■ no unintentional transmission.

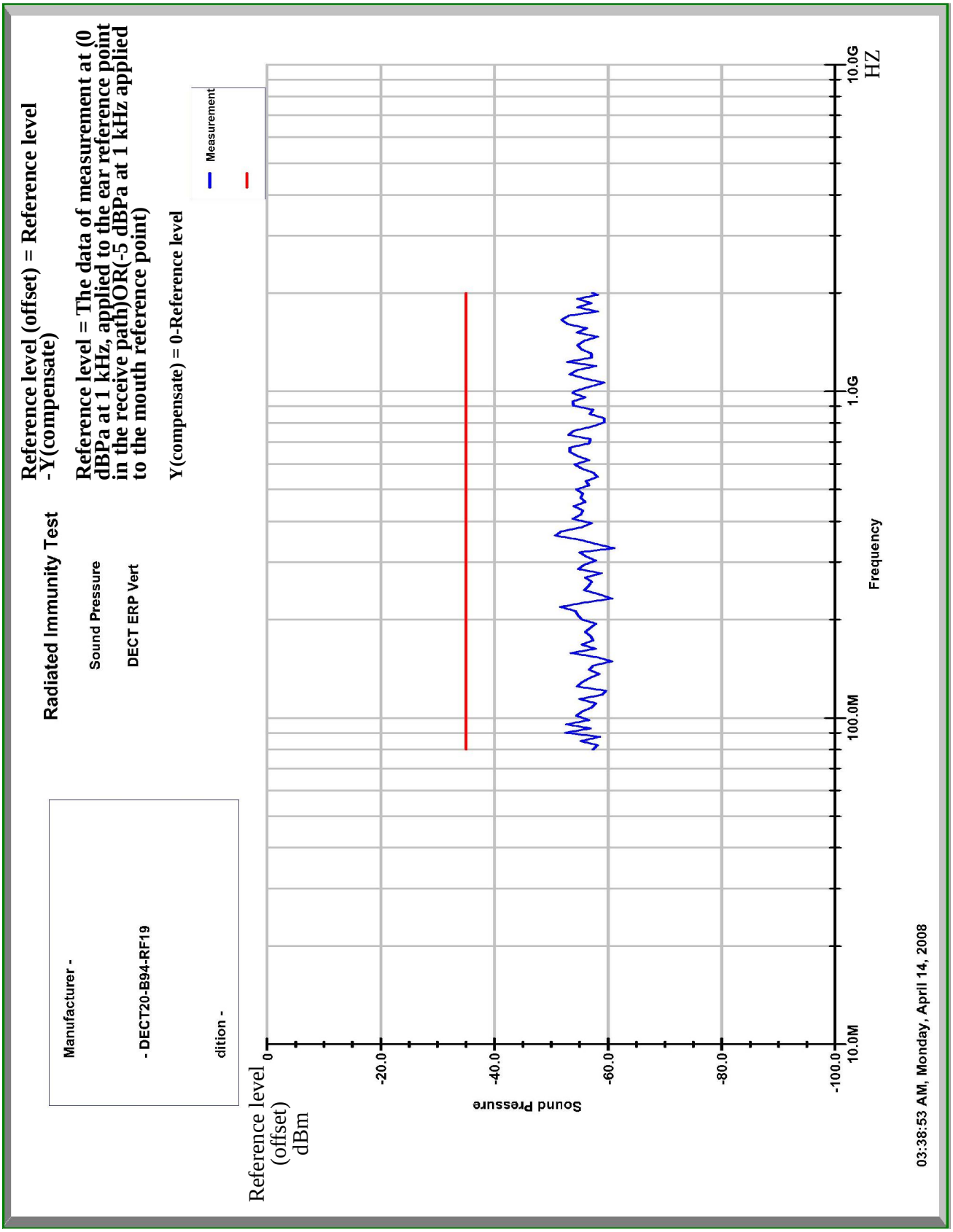
Remarks: Testing has been conducted at 3-meter anechoic chamber.

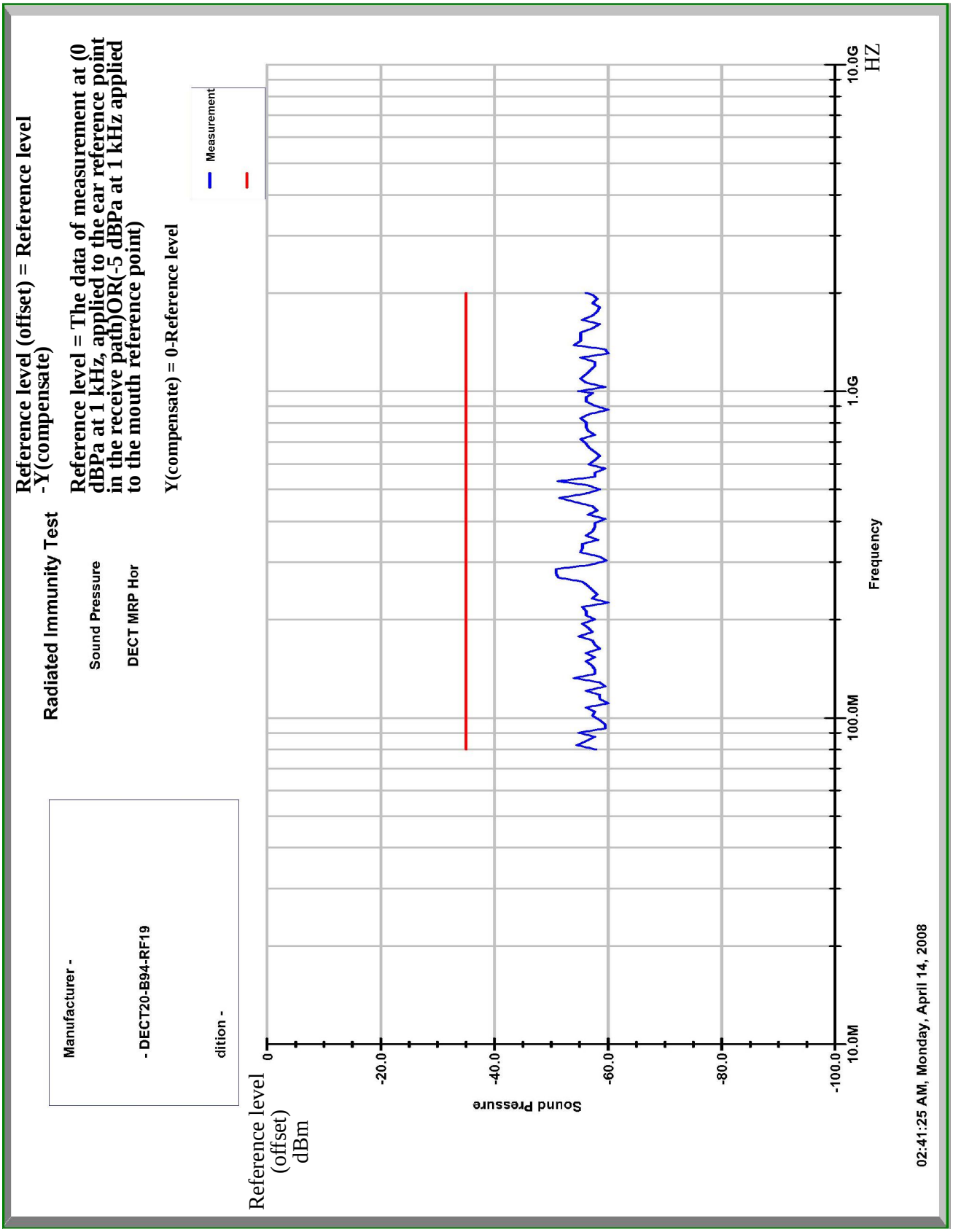
4.2.2.2 Radio Frequency Electromagnetic Field (80~1000MHz and 1400~2000MHz)

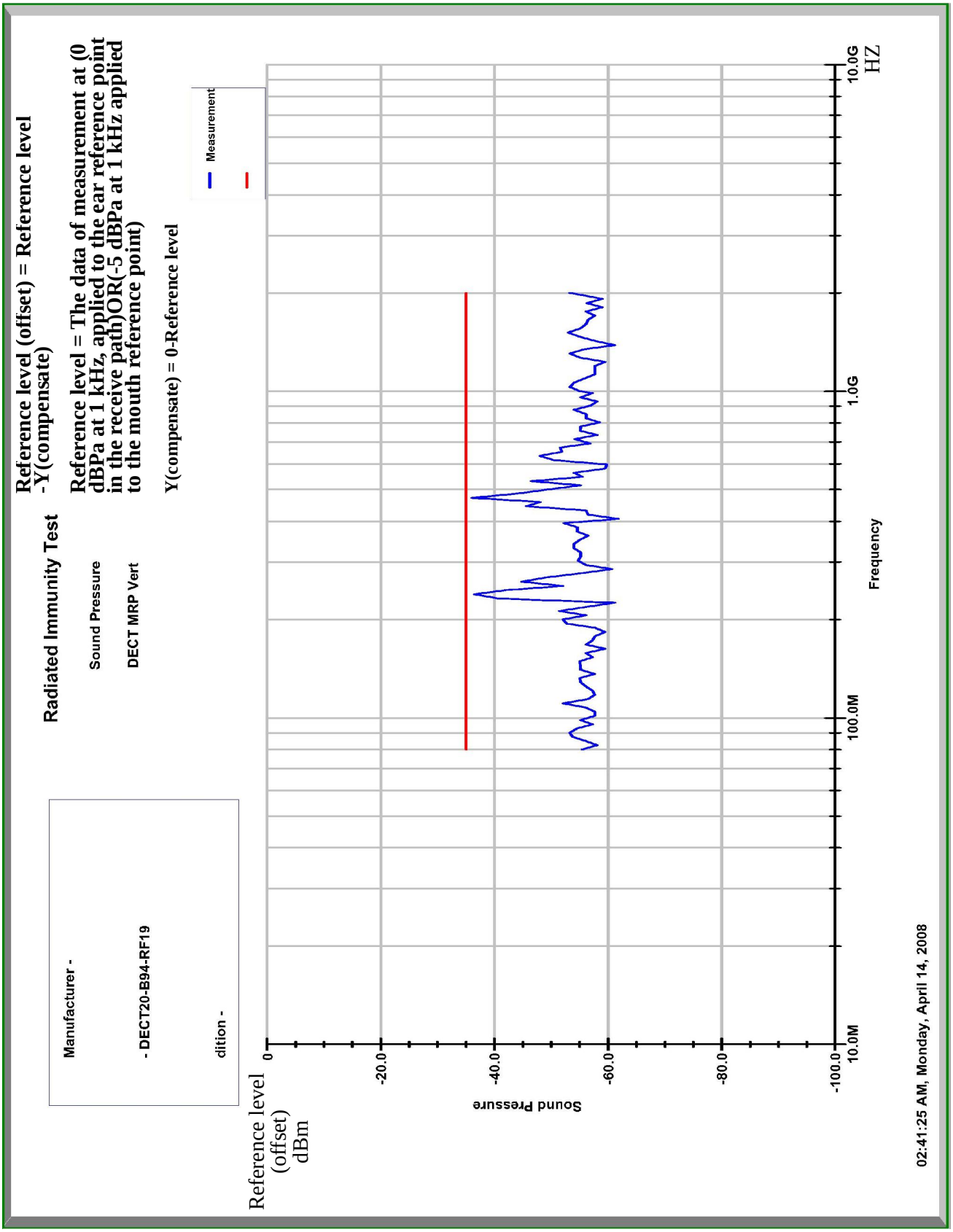
Test Setup Photos:




Reference level (offset) = Reference level -Y(compensate)
Radiated Immunity Test
Sound Pressure
DECT ERP Hor
Reference level = The data of measurement at (0 dBPa at 1 kHz, applied to the ear reference point in the receive path)OR(-5 dBPa at 1 kHz applied to the mouth reference point)
Y(compensate) = 0-Reference level
Measurement
Manufacturer -
- DECT20-B94-RF19
dition -
Reference level (offset) dBm
0
-20.0
-40.0
-60.0
-80.0
-100.0
Sound Pressure
10.0M
100.0M
1.0G
10.0G
HZ
Frequency
03:53:23 AM, Monday, April 14, 2008


Reference level (offset) = Reference level - Y(compensate)
Radiated Immunity Test
Reference level = The data of measurement at (0 dBPa at 1 kHz, applied to the ear reference point in the receive path)OR(-5 dBPa at 1 kHz applied to the mouth reference point)
Sound Pressure
Y(compensate) = 0-Reference level
DECT ERP Vert
Measurement
Manufacturer -
- DECT20-B94-RF19
dition -
Reference level (offset) dBm
0
-20.0
-40.0
-60.0
-80.0
-100.0
Sound Pressure
10.0M
100.0M
1.0G
10.0G
HZ
Frequency
03:38:53 AM, Monday, April 14, 2008


Reference level (offset) = Reference level -Y(compensate)
Radiated Immunity Test
Reference level = The data of measurement at (0 dBPa at 1 kHz, applied to the ear reference point in the receive path)OR(-5 dBPa at 1 kHz applied to the mouth reference point)
Sound Pressure
DECT MRP Hor
Y(compensate) = 0-Reference level
Manufacturer -
- DECT20-B94-RF19
dition -
Measurement
Reference level (offset) dBm
0
-20.0
-40.0
-60.0
-80.0
-100.0
Sound Pressure
10.0M
100.0M
1.0G
10.0G
HZ
Frequency
02:41:25 AM, Monday, April 14, 2008


Reference level (offset) = Reference level -Y(compensate)
Radiated Immunity Test
Reference level = The data of measurement at (0 dBPa at 1 kHz, applied to the ear reference point in the receive path)OR(-5 dBPa at 1 kHz applied to the mouth reference point)
Sound Pressure
DECT MRP Vert
Y(compensate) = 0-Reference level
Manufacturer -
- DECT20-B94-RF19
dition -
Measurement
Reference level (offset) dBm
0
-20.0
-40.0
-60.0
-80.0
-100.0
Sound Pressure
10.0M
100.0M
1.0G
10.0G
HZ
Frequency
02:41:25 AM, Monday, April 14, 2008

4.2.3 Fast Transients Common Mode:

4.2.3.1 Fast Transients Common Mode Test Data:

A. Operating Conditions of the EUT: Talking Mode

Test Date: Apr. 14, 2008

Test Specification	EN 61000-4-4:2004	
Test Equipment	Calibration Date	Recommended Recal. Date
EFT Generator/Clamp\Noiseken\FNS-AXII	Sep. 21, 2007	Sep. 20, 2008
Climatic Condition	Ambient Temperature: 24 ◦C Relative Humidity: 58 % RH Atmospheric Pressure: 987 mbar	
Power Supply System	AC Power: 230 Vac 50 Hz	
Test Set-up	Table-top Equipment	

Pulse: 5 /50ns Burst: 15ms /300ms		Repetition Rate: 2.5kHz above 2.0kV 5kHz below and equal 2.0kV		Test time: 1 min/each condition	
\Voltage\Polarity\ \Test Point\Mode\Result\		1.0 kV		0.5 kV	
		+	-	+	-
Power Line	L	A	A	--	--
	N	A	A	--	--
TEL Line		--	--	A	A

Note: " A " means the EUT operates with ■ no user noticeable loss of the communication Link.
■ no loss of user control functions or stored data.
■ no unintentional transmission.

" -- " means the test is not applicable.

4.2.3.2 Fast Transients Common Mode Test Setup Photos:

1. Power Line

2. Tel Line

4.2.4 Surge, Common and Differential Mode:

4.2.4.1 Surge, Common and Differential Mode Test Data:

A. Operating Conditions of the EUT: Talking Mode

Test Date: Apr. 14, 2008

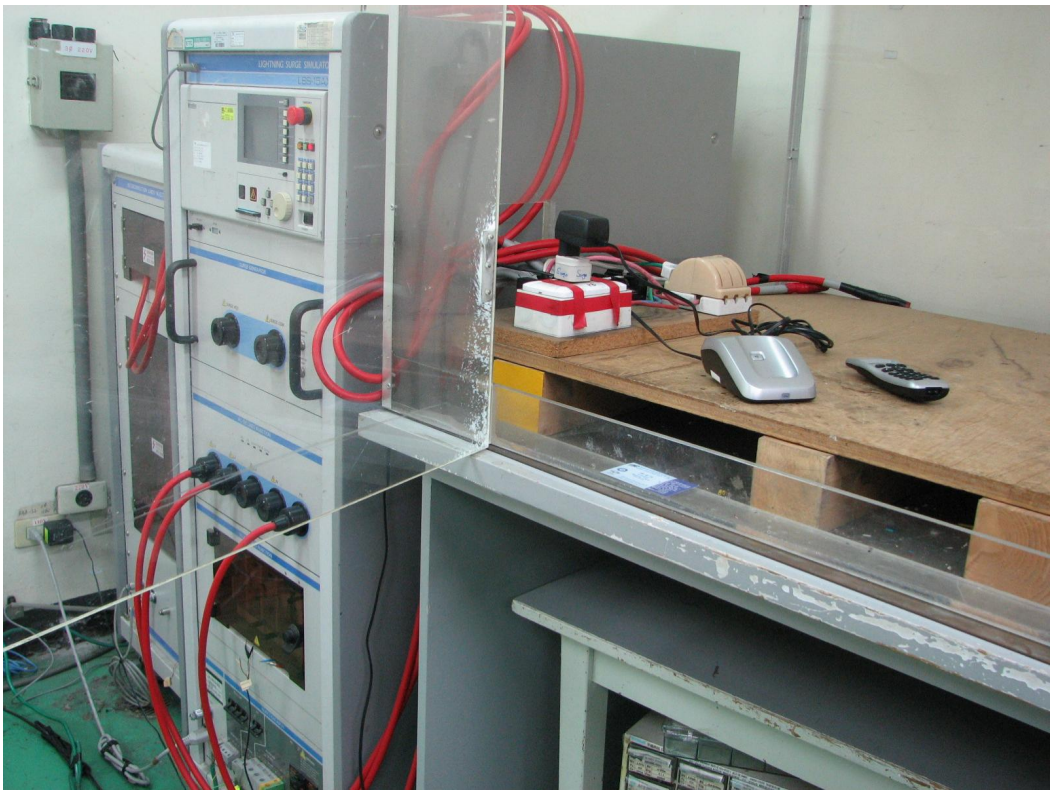
Test Specification	EN 61000-4-5: 2006	
Test Equipment	Calibration Date	Recommended Recal. Date
Lightning Surge Simulator\Noiseken\LSS-15AX	May 17, 2007	May 16, 2008
Climatic Condition	Ambient Temperature: 23◦ C Relative Humidity: 54 % RH Atmospheric Pressure: 983 mbar	
Power Supply System	AC Power: 230 Vac 50 Hz	
Test Set-up	Table-top Equipment	

Waveform: 1.2/50μs(8/20μs)			Repetition rate: 60 sec			Times: 5 times/each condition
		\Phase \Voltage \Mode \Polarity \Result	**0°**	**90°**	**180°**	**270°**
1.0 kV	L – N	+	A	A	A	A
		–	A	A	A	A

Waveform: 1.2/50μs(8/20μs)	Repetition rate: 60 sec		Times: 5 times/each condition	
\Voltage	0.5 kV		0.5 kV	
\Turn earth	TIP		RING	
\Testing mode \Result \Polarity	+	–	+	–
TEL Line	A	A	A	A

Note: " A " means the EUT operates with ■ no user noticeable loss of the communication Link.
■ no loss of user control functions or stored data.
■ no unintentional transmission.

4.2.4.2 Surge, Common and Differential Mode Test Setup Photos:



4.2.5 RF Common Mode, 0.15MHz~80MHz:

4.2.5.1 RF Common Mode, 0.15MHz~80MHz Test Data:

A. Operating Conditions of the EUT: Talking Mode

Test Date: Apr. 14, 2008

Test Specification	EN 61000-4-6:1996/A1:2001	
Test Equipment	Calibration Date	Recommended Recal. Date
Signal Generator\R&S\SMY02	Nov. 21, 2007	Nov. 20, 2008
Wideband RF Power Amplifier\IFI\M5540	Nov. 21, 2007	Nov. 20, 2008
RF Voltmeter\Boonton\9200B	Nov. 22, 2007	Nov. 21, 2008
Controller \HP\ Vectra VL24/33	N.C.R.	N.C.R.
RF Switch \COMTEST \RF-6	N.C.R.	N.C.R.
High Power Direction Coupler\WERLATONE\C1795	Nov. 22, 2007	Nov. 21, 2008
Attenuator\RADIALL\R415706	Nov. 07, 2007	Nov. 06, 2008
801-6 Coupling Network-M2\FCC\4412-025	Nov. 06, 2007	Nov. 05, 2008
801-6 Coupling Network-T2\FCC\FCC-801-T2	Nov. 06, 2007	Nov. 05, 2008
Digital Radio Tester\R&S\CTS60	Mar. 14, 2008	Mar. 13, 2009
Climatic Condition	Ambient Temperature: 23 ◦ C	Relative Humidity: 52 % RH
Power Supply System	AC Power: 230 Vac 50 Hz	
Test Set-up	Table-top Equipment	

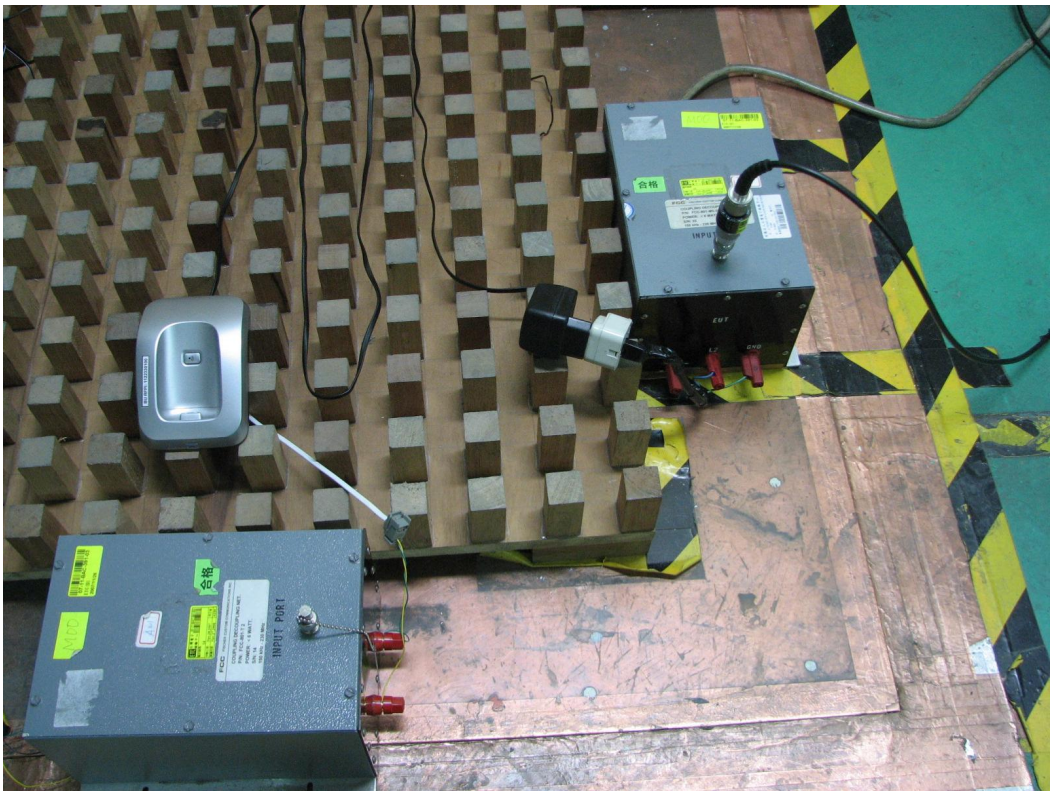
Frequency Range: 0.15 MHz ~ 80 MHz	Test Voltage: 3 V	Modulation (AM 1kHz 80%)
Sweep Rate: ≤ 1.5×10^{-3} decades/s	Step Size: ≤ 1 % of preceding frequency value	Dwell Time: 2.9 s

Frequency Range (MHz)	Tested Line	Test Result
0.15~80	Power Line (M2)	A
0.15~80	Tel. Line (T2)	A

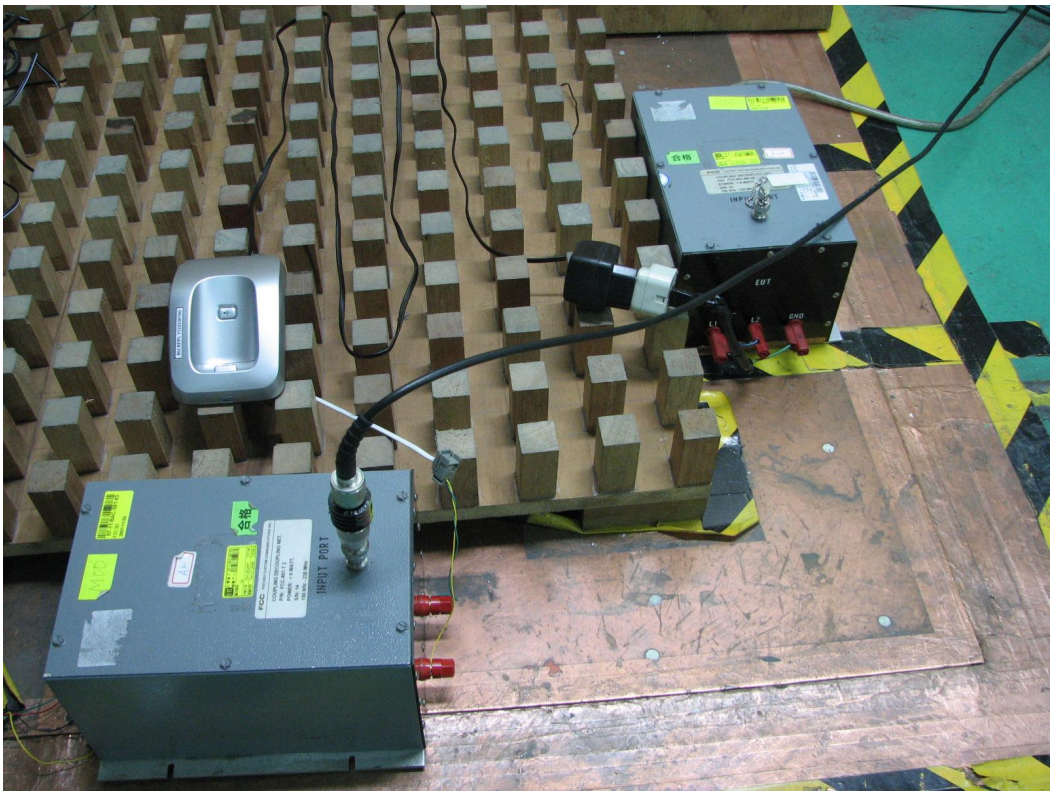
Note: " A " means the EUT operates with ■ BER less or equal than 1×10^{-3} during the test sequence.
■ the speech output signal level at least 35dB less than the previously recorded reference level.
■ no loss of user control functions or stored data and maintained communication link during and after the tests.
■ no unintentional transmission.

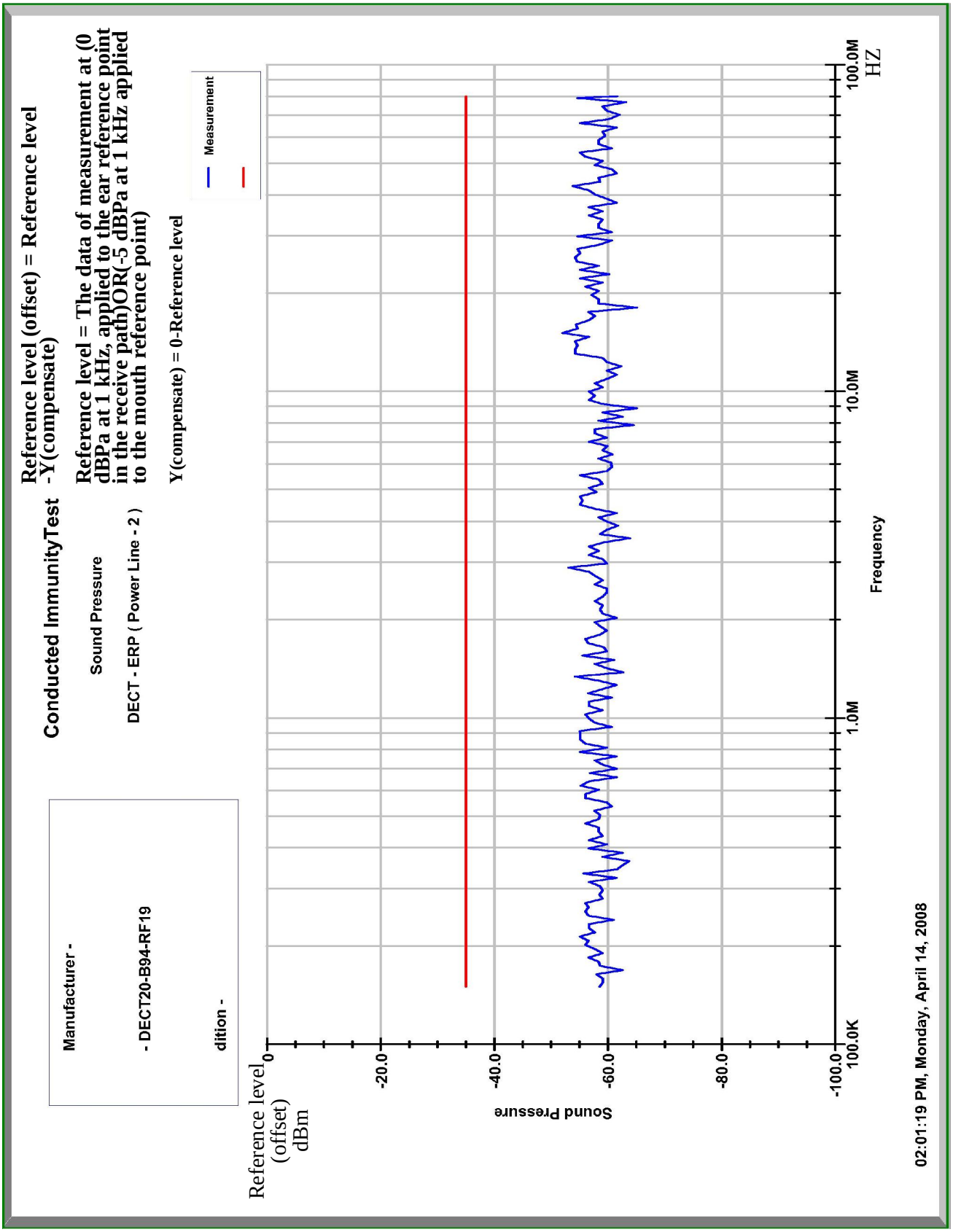
4.2.5.2 RF Common Mode, 0.15MHz~80MHz Test Setup Photos:

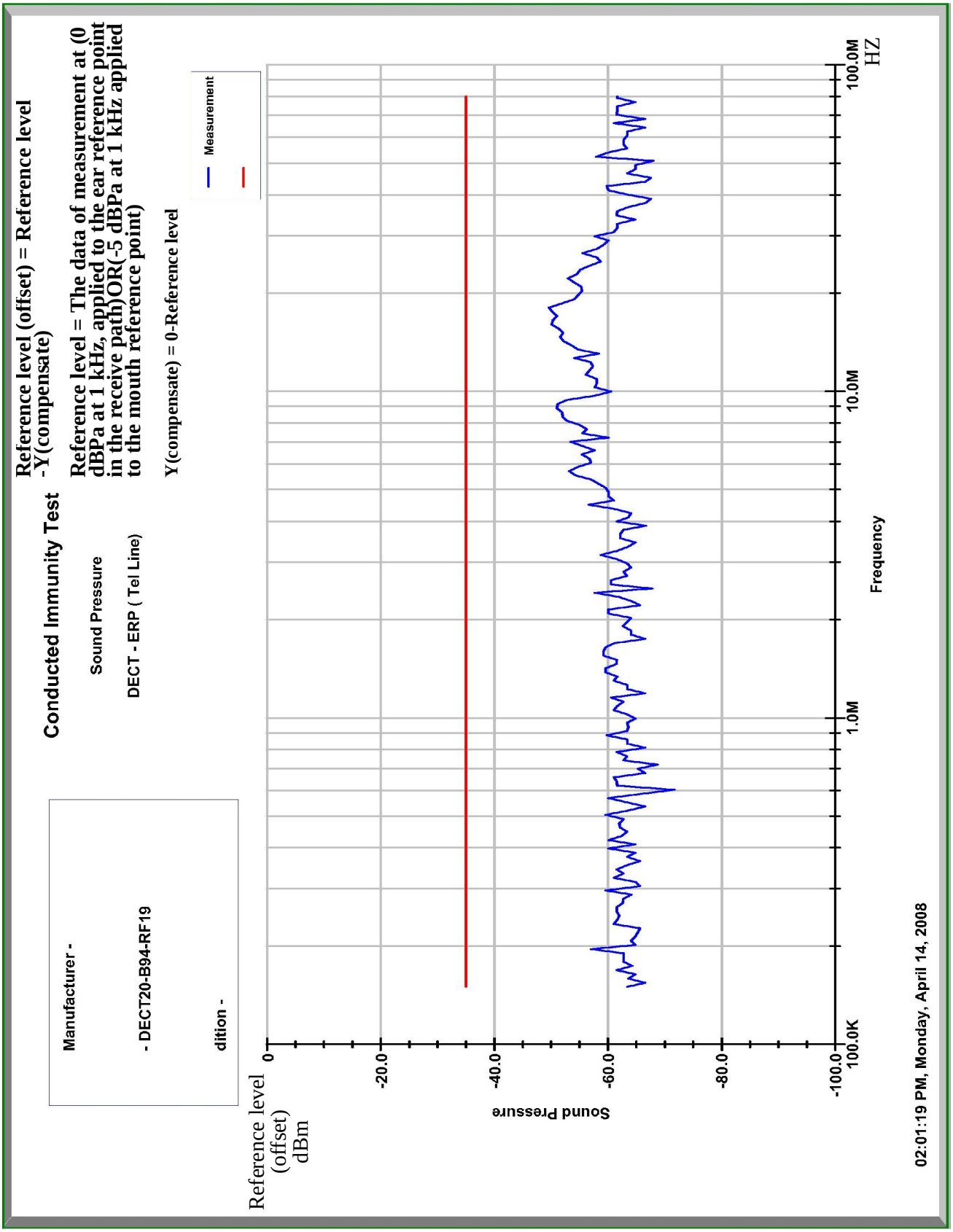
1. Power Line

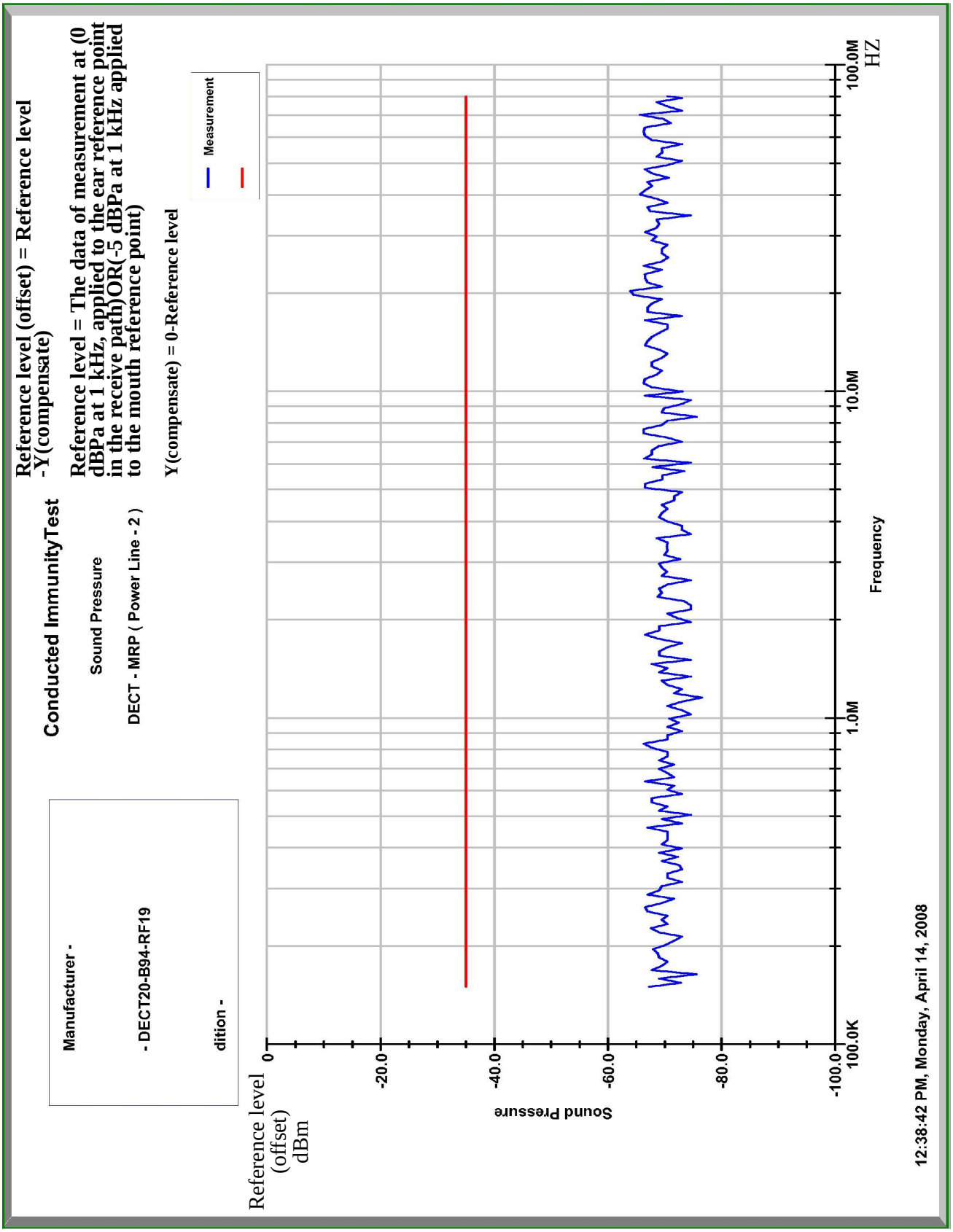


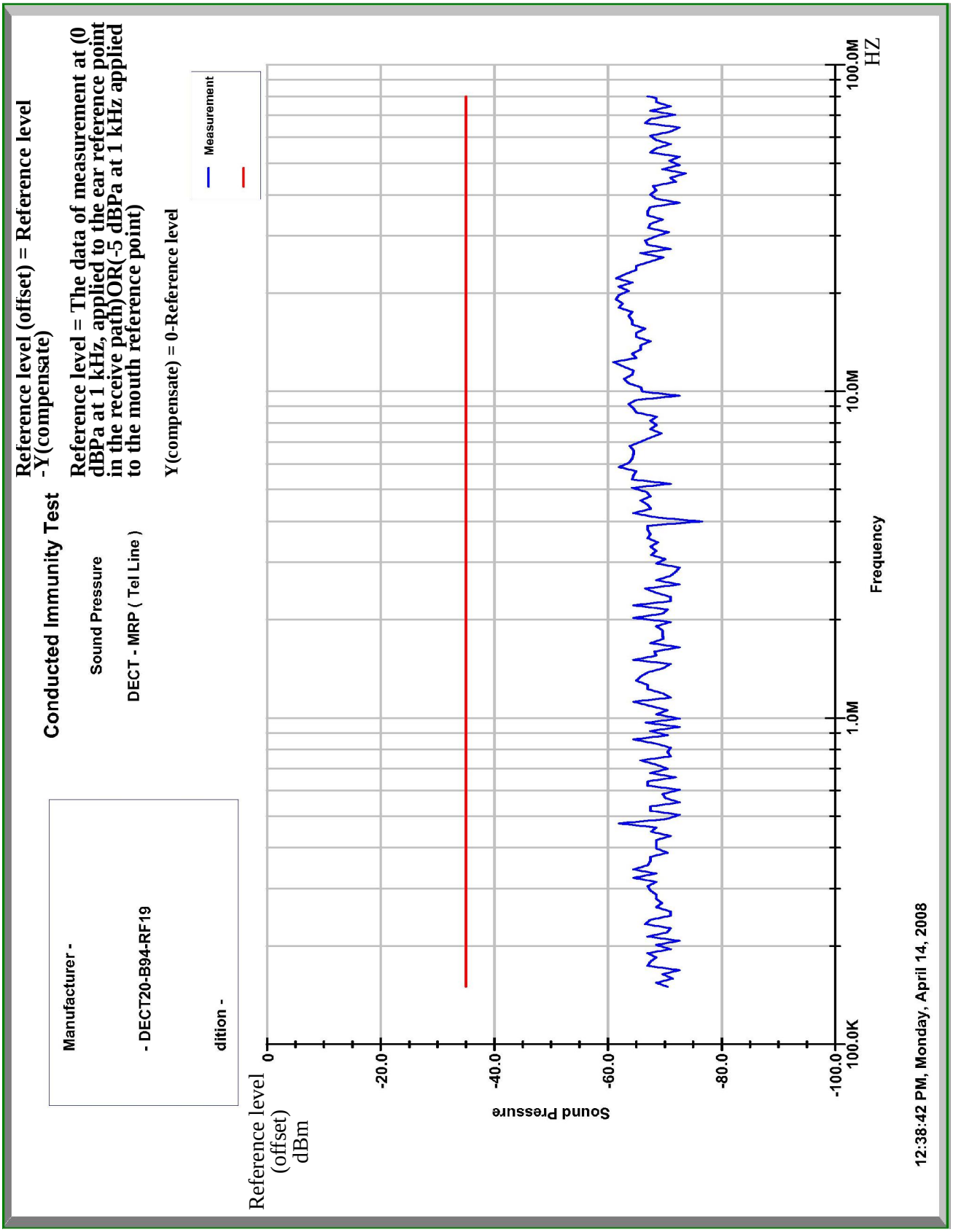
2. Tel Line




Reference level (offset) = Reference level -Y(compensate)
Conducted ImmunityTest
Reference level = The data of measurement at (0 dBPa at 1 kHz, applied to the ear reference point in the receive path)OR(-5 dBPa at 1 kHz applied to the mouth reference point)
Sound Pressure
Y(compensate) = 0-Reference level
DECT - ERP (Power Line - 2)
Measurement
Manufacturer -
- DECT20-B94-RF19
dition -
Reference level (offset) dBm
0
-20.0
-40.0
-60.0
-80.0
-100.0
Sound Pressure
100.0K
1.0M
10.0M
100.0M
HZ
Frequency
02:01:19 PM, Monday, April 14, 2008


Reference level (offset) = Reference level -Y(compensate)
Conducted Immunity Test
Reference level = The data of measurement at (0 dBPa at 1 kHz, applied to the ear reference point in the receive path)OR(-5 dBPa at 1 kHz applied to the mouth reference point)
Sound Pressure
DECT - ERP (Tel Line)
Y(compensate) = 0-Reference level
Measurement
Manufacturer -
- DECT20-B94-RF19
dition -
Reference level (offset) dBm
0
-20.0
-40.0
-60.0
-80.0
-100.0
Sound Pressure
100.0K
1.0M
10.0M
100.0M
HZ
Frequency
02:01:19 PM, Monday, April 14, 2008


Reference level (offset) = Reference level -Y(compensate)
Conducted ImmunityTest
Reference level = The data of measurement at (0 dBPa at 1 kHz, applied to the ear reference point in the receive path)OR(-5 dBPa at 1 kHz applied to the mouth reference point)
Sound Pressure
DECT - MRP (Power Line - 2)
Y(compensate) = 0-Reference level
Measurement
Manufacturer -
- DECT20-B94-RF19
dition -
Reference level (offset) dBm
0
-20.0
-40.0
-60.0
-80.0
-100.0
Sound Pressure
100.0K
1.0M
10.0M
100.0M
HZ
Frequency
12:38:42 PM, Monday, April 14, 2008


Reference level (offset) = Reference level -Y(compensate)
Conducted Immunity Test
Reference level = The data of measurement at (0 dBPa at 1 kHz, applied to the ear reference point in the receive path)OR(-5 dBPa at 1 kHz applied to the mouth reference point)
Sound Pressure
DECT - MRP (Tel Line)
Y(compensate) = 0-Reference level
Measurement
Manufacturer -
- DECT20-B94-RF19
dition -
Reference level (offset) dBm
0
-20.0
-40.0
-60.0
-80.0
-100.0
Sound Pressure
100.0K
1.0M
10.0M
100.0M
HZ
Frequency
12:38:42 PM, Monday, April 14, 2008

4.2.6 Voltage Dips and Interruptions:

4.2.6.1 Voltage Dips and Interruptions Test Data:

A. Operating Conditions of the EUT: Talking Mode

Test Date: Apr. 14, 2008

Test Specification	EN 61000-4-11:2004	
Test Equipment	Calibration Date	Recommended Recal. Date
EMC Immunity Test System\THERMO\EMCPRO PLUS	Oct. 25, 2007	Oct. 24, 2008
Climatic Condition	Ambient Temperature: 21◦ C Relative Humidity: 54 % RH Atmospheric Pressure: 983 mbar	
Power Supply System	AC Power: 230 Vac 50 Hz	
Test Set-up	Table-top Equipment	

Test mode	Voltage dips	Durations (ms)	Interval (s)	Times	Phase	Result
Voltage interruptions	100%	5000	10	12	0 ° / 180 °	C
Voltage dips in %U_T	60%	100	10	12	0 ° / 180 °	C
	30%	10	10	12	0 ° / 180 °	A

Note: " A " means the EUT operates with ■ no user noticeable loss of the communication Link.
■ no loss of user control functions or stored data.
■ no unintentional transmission.

" C " means the EUT function was not correct during the test, which was recovered by operator after test.

4.2.6.2 Voltage Dips and Interruptions Test Setup Photos: